

IN THE CLAIMS:

Please AMEND the claims as follows:

1. (CURRENTLY AMENDED) An optical device, comprising:
~~a substrate having a first surface and a second surface, wherein said the first surface of the substrate is opposite the second surface of the substrate; substrate is fixed via the first surface to a fixing material having substantially the same thermal expansion coefficient as the substrate;~~
a first multi-layer film formed on the first surface of the substrate;
~~a fixing material having substantially a same thermal expansion coefficient as the substrate and fixed to the first multi-layer film and the first surface;~~
a second multi-layer film formed on the second surface of the substrate; and
a stress correction film formed on the second multi-layer film, correcting distortion of the substrate due to a difference in stress between the first and second multi-layer films formed on the first and second surfaces, respectively.
2. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said stress correction film is transparent to light with a specific wavelength, and the optical film thickness is an integral multiple of one half of the specific wavelength.
3. (ORIGINAL) The optical device according to claim 1, wherein said stress correction film is made of SiO_2 .
4. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said stress correction film maintains profile irregularity of the substrate at a value of one wavelength or less.
5. (PREVIOUSLY PRESENTED) The optical device according to claim 1, comprising:
a VIPA optical element further comprising:
said substrate being a plate transparent to light with a specific wavelength;
said first multi-layer film;
said second multi-layer film; and
said stress correction film maintaining the VIPA optical element substantially

planar, and

a mirror reflecting and returning the spectral components of light separated by the VIPA optical element to the VIPA optical element, wherein

a dispersion compensator is realized by using said VIPA optical element and said mirror.

6. (CANCELLED)

7. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of transparent glass or semiconductor.

8. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of opaque metal or ceramic.

9. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of copper-tungsten alloy, Kovar alloy, alumina, or BeO.

10. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is fixed on said fixing material by organic adhesives, metallic soldering, or low melting point glass.

11. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is fixed on said fixing material at a plurality of points.

12. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is optically connected with said fixing material.

13. (PREVIOUSLY PRESENTED) The optical device according to claim 12, wherein the material of the optically connected surfaces is made of SiO₂.

14. (CURRENTLY AMENDED) A method for correcting distortion in an optical element, wherein the optical element includes a substrate having a first surface and a second surface opposite the first surface, a first multi-layer film, a second multi-layer film, and a stress correction film, said method comprising:

fixing said substrate via a portion of the first surface to a fixing material having

substantially the same thermal expansion coefficient as said substrate;
forming a first multi-layer film on a portion of the first surface of the substrate;
forming a second multi-layer film on the second surface of the substrate opposite
the first surface of the substrate; and
forming a stress correction film on the second multi-layer film, correcting distortion
of the substrate due to a difference in stress between the first and second multi-layer films
formed on the first and second surfaces, respectively.

15. (CURRENTLY AMENDED) An optical device, comprising:
a substrate having a first surface and a second surface that is opposite the first
surface, wherein said substrate is fixed via a portion of the first surface to a fixing material
having substantially the same thermal expansion coefficient as the substrate;
a first film formed on a portion of the first surface of the substrate;
a second film formed on the second surface of the substrate; and
a stress correction film formed on the second multi-layer film, correcting distortion
of the substrate due to a difference in stress between the first and second films formed on the
first and second surfaces, respectively.